LISTING OF THE CLAIMS

1. (Currently amended) A catheter for ~~the~~ aspiration, fragmentation and removal of removable material from hollow bodies, in particular of thrombi and emboli from blood vessels, the catheter comprising:

a working head ~~(11) which~~ that is axially displaceable over a guide wire, ~~(6)~~ is displaceable independently ~~thereof~~ the guide wire, ~~and~~ is arranged at ~~the~~ a distal end of the catheter, and ~~which~~ has at least one lateral opening ~~(14);, the catheter (10) having~~

a flexible transport screw ~~(13) which~~ that has a distal and a proximal part and is capable of being rotated by means of a rotary drive ~~(2)~~ of a drive unit ~~(1)~~, ~~which~~ the rotary drive ~~is~~ being a distance away from the working head ~~(11), and comprising;~~

a flexible tube ~~(12)~~ surrounding the transport screw ~~(13)~~, connected to the working head ~~(11)~~ and intended for removing the removable material or ~~the~~ detached thrombi and emboli fragments;, and

a cutting tool ~~(13),~~ ;

wherein the transport screw ~~(13) is in the~~ forms ~~of~~ a shearing cutting tool in cooperation~~ing~~ with the lateral opening ~~(14)~~ of the working head ~~(11)~~ for comminuting ~~the penetrating~~ materials or aspirated and/or detached thrombi and emboli penetrating between ~~the~~ peripheral borders ~~(13a)~~ of the transport screw ~~(13)~~.

2. (Currently amended) A catheter for ~~the~~ aspiration, fragmentation and removal of removable material from hollow bodies, in particular of thrombi and emboli from blood vessels, the catheter comprising:

a distal and a proximal end;,

a working head ~~(11) which~~ that is axially displaceable over a guide wire ~~(6)~~

independently thereof, ~~and~~ is arranged at the distal end of the catheter, and ~~which~~ has at least one lateral opening ~~(14), the catheter (10) having~~;

a flexible transport screw ~~(13) which~~ that has a distal and a proximal part, extends from the proximal to the distal end of the catheter, and is capable of being rotated by means of a rotary drive ~~(2)~~ of a drive unit ~~(1)~~, ~~which~~ the rotary drive ~~is~~ being a distance away from the working head ~~(11)~~, and the transport screw ~~(13)~~ being provided with transport surfaces ~~which~~that extend helically along ~~its~~ a longitudinal axis of the transport screw and in ~~the~~ a direction of radii of the transport screw~~, and comprising~~;

a flexible tube ~~(12)~~ surrounding the transport screw ~~(13)~~, connected to the working head ~~(11)~~ and intended for removing the removable material or ~~the~~ detached thrombi and emboli fragments, and

a cutting tool;~~,~~

wherein the transport screw ~~(13) is formed~~forms, in the region of the working head ~~(11)~~, ~~as~~ a shearing cutting tool in cooperation~~ing~~ with the lateral opening ~~(14)~~ of the working head ~~(11)~~, ~~which~~ and wherein the cutting tool, in ~~the~~ an operating state, continuously

comminutes the ~~penetrating~~ material or aspirated and/or detached thrombi and emboli penetrating between ~~the~~ peripheral borders ~~(13a)~~ of the transport screw ~~(13)~~ and borders of the lateral openings ~~(14)~~ and

removes them along the transport surface in ~~the~~ a direction of the proximal end ~~(7)~~.

3. (Currently amended) A working head on a catheter for ~~the~~ aspiration, fragmentation and removal of removable material from hollow bodies, in particular of thrombi and emboli from blood vessels, the working head comprising:

~~which has~~ at least one lateral opening ~~(14);~~,

wherein the catheter ~~(10) having~~comprises:

a flexible transport screw ~~(13) which~~ that has a distal and a proximal part and can be rotated by means of a rotary drive ~~(2)~~ of a drive unit ~~(1)~~, ~~which~~ the rotary drive ~~is~~ being a distance away from the working head ~~(11)~~, and the transport screw ~~(13)~~ being provided with transport surfaces, and

a cutting tool,

wherein the transport screw ~~(13) is formed~~comprises, in ~~the~~ a region of the working head ~~(11)~~, ~~as~~ a shearing cutting tool ~~which~~ that cooperates with the opening ~~(14)~~ of the working head ~~(11)~~ and, in ~~the~~ an operating state, continuously

comminutes the ~~penetrating~~ materials or aspirated and/or detached thrombi and emboli penetrating between ~~the~~ peripheral borders ~~(13a)~~ of the transport screw ~~(13)~~ and borders of the at least one lateral openings ~~(14)~~ and

removes them along the transport surface, and

wherein the lateral opening ~~(14)~~ of the working head ~~(11) is in the~~ forms ~~of~~ an L-shaped slot ~~(14i, 14k, 14l, 14m)~~ having a limb extending substantially in ~~the~~ a longitudinal direction and a limb extending along a part of ~~the~~ a circumference.

4. (Currently amended) The working head as claimed in claim 3, wherein ~~the~~ a ratio of ~~the~~ a width of the limb extending in the longitudinal direction to ~~the~~ a width of the limb extending ~~in~~ along the part of the circumferen~~tial direction~~ce is from 1.0 to 1.3.

5. (Currently amended) The catheter ~~or working head~~ as claimed in ~~any of~~ claims 1 ~~to~~ 4, wherein the distal part of the transport screw ~~(13)~~ in the region of the working head ~~(11)~~ is formed so as to be an exact fit in ~~the~~ an external diameter relative to ~~the~~ an internal diameter of

~~the~~ a ~~preferably~~ substantially cylindrical working head ~~(11)~~, so that the external diameter of the transport screw ~~(13)~~ has only minimal diameter play relative to the internal diameter of ~~the~~ an inner lateral surface of the working head ~~(11)~~.

6. (Currently amended) The catheter ~~or working head~~ as claimed in ~~any of~~ claims 1 ~~to 5~~, wherein ~~the~~ edges on ~~the~~ an outside of the transport screw ~~(13)~~ are formed so as to be sharp in ~~the~~ a region of the lateral opening ~~(14)~~ of the working head ~~(11)~~.

7. (Currently amended) The catheter ~~or working head~~ as claimed in ~~any of the preceding~~ claims 1, wherein the working head ~~(11)~~ tapers towards ~~its~~ the distal end ~~(8)~~.

8. (Currently amended) The catheter ~~or working head~~ as claimed in ~~any of the preceding~~ claims 1, wherein ~~the~~ edges ~~(15)~~ of the lateral opening ~~(14a)~~ are formed so as to be sharp at least in sections in ~~the~~ a region of ~~the~~ an inner lateral surface of the working head ~~(11)~~.

9. (Currently amended) The catheter ~~or working head~~ as claimed in ~~any of the preceding~~ claims 1, wherein ~~the~~ edges ~~(15)~~ of the lateral opening ~~(14a)~~ are formed so as to be rounded at least in sections in ~~the~~ a region of ~~the~~ an outer lateral surface of the working head ~~(11a)~~.

10. (Currently amended) The catheter as claimed in ~~any of the preceding~~ claims 1, wherein the lateral opening ~~(14)~~ is in the form of a slot.

11. (Currently amended) The catheter as claimed in claim 10, wherein the slot runs at least partially in ~~the~~ an axial direction of the working head ~~(11)~~.

12. (Currently amended) The catheter as claimed in claim 10 ~~or 11~~, wherein the slot ~~(14n, 14o, 14p, 14q)~~ is formed, relative to ~~the~~ a longitudinal axis of the working head ~~(11n, 11o, 11p, 11q)~~, at least partly along a helix.

13. (Currently amended) The catheter ~~or working head~~ as claimed in ~~any of~~ claims ~~3 to 9 and~~ 11 ~~to 12~~, wherein ~~the~~ a width of the slot ~~(14h)~~ decreases toward ~~the~~ a proximal end of the working head ~~(11h)~~.

14. (Currently amended) The catheter as claimed in ~~any of~~ claims 10 ~~to 13~~, wherein the slot ~~(14i, 14k, 14l, 14m)~~ is formed in an L-shape.

15. (Currently amended) The catheter ~~or working head~~ as claimed in ~~any of the preceding~~ claims 1, wherein, in ~~the~~ a distal end region of the working head, ~~(11b, 11f, 11g, 11q)~~ at least one groove-like recess, ~~(19a, 19b, 19c)~~ starting from the distal end and opening in-to the lateral opening, ~~(14b, 14f, 14g, 14q)~~ is arranged on ~~the~~ an outer lateral surface.

16. (Currently amended) The catheter ~~or working head~~ as claimed in claim 15, wherein ~~the~~ a depth of the groove-like recess ~~(19)~~ increases toward ~~the~~ a proximal end of the working head.

17. (Currently amended) The catheter ~~or working head~~ as claimed in claim 15 ~~or 16~~, wherein ~~the~~ a width ~~(b)~~ of the groove-like recess ~~(19b)~~ is greater than ~~the~~ a chord ~~(s)~~ of ~~the~~ an internal diameter of the working head ~~(11f)~~ in ~~the~~ a region of ~~the~~ a groove base.

18. (Currently amended) The catheter ~~or working head~~ as claimed in ~~any of the preceding~~ claims 1, wherein the working head ~~(11a)~~ is connected to the tube ~~(12)~~ axially in a manner resistant to tension and pressure.

19. (Currently amended) The catheter as claimed in ~~any of the preceding~~ claims 1, wherein the tube ~~(12)~~ has a reinforcement ~~(17)~~ in ~~at least in~~ one or more sections.

20. (Currently amended) The catheter as claimed in claim 19, wherein the reinforcement ~~(17)~~ is in the form of a metallic helix.

21. (Currently amended) The catheter as claimed in claim 19 ~~or 20~~, wherein the reinforcement ~~(17)~~ is arranged on ~~the~~ an inside of the tube ~~(12)~~.

22. (Currently amended) The catheter as claimed in ~~any of the abovementioned~~ claims 1, wherein the tube comprises ~~(12) is formed in two parts, the~~ a proximal part, ~~being in the form of~~ comprising a plastic tube, and ~~the~~ a distal part, ~~being in the form of~~ comprising a metallic helical spring ~~(17)~~ having a thin-walled elastic plastic sheath ~~(18)~~.

23. (Currently amended) The catheter ~~or working head~~ as claimed in ~~any of the abovementioned~~ claims 1, wherein the working head ~~(11)~~ and/or the transport screw ~~(13) consist of~~ comprise metal, ~~in particular of~~ including stainless steel.

24. (Currently amended) The catheter ~~or working head~~ as claimed in ~~any of the above mentioned~~ claims 1, wherein the working head ~~(11) is composed of~~ comprises sintered ceramic, ~~or~~ metal ceramic or ~~has~~ a highly resistant layer, for protection from wear.

25. (Currently amended) The working head for a catheter as claimed in ~~any of the abovementioned~~ claims 3, as shown and described ~~according to~~ in at least one of figs. 4 to 80.